

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Steven J. LOCKE and Devanand

PINTO

Title:

QUANTITATIVE ANALYSIS

OCT 9 1 2005

VIA ISOTOPICALLY DIFFERENTIATED **DERIVATIZATION**

Appl. No.:

10/621,958

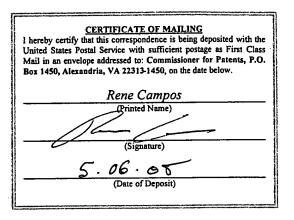
Filing Date: 7/16/2003

Examiner:

David J. Venci

Art Unit:

1641



FIRST INFORMATION DISCLOSURE STATEMENT **UNDER 37 CFR §1.56**

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56.

A copy of each international patent document and each non-patent document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

Also submitted is a copy of the International Search Report from a PCT Application related to the above-noted application, PCT/CA03/01072.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present

application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a prima facie art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(c), before the mailing date of either a final action under 37 CFR §1.113, a notice of allowance under 37 CFR §1.311, or an action that otherwise closes prosecution in the application.

RELEVANCE OF EACH DOCUMENT

All of the documents are in English.

Applicants respectfully request that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

FEE

A fee in connection with submission of an information disclosure statement under 37 CFR §1.97(c) in the amount of \$180.00 in accordance with 37 CFR §1.17(p) is attached.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-0872. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even

entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-0872.

Respectfully submitted,

Attorney for Applicant

Registration No. 50,782

Date <u>May 5, 2005</u>

FOLEY & LARDNER LLP

Customer Number: 38706

Telephone: (650) 251-1104 Facsimile: (650) 856-3710

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MODIFIED PTO/SB/08 (08-00) Approved for use through 10/31/2002. OMB 0651-0031

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	Date Submitte	. d. Mass C	ha	OCT 3 1 2005	சிirst Named Inventor	Steven J. LOCKE	
	Date Submitte	ed: May 6,	200) \	Group Art Unit	1641	
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Sheet	1	of	3	PADEMA	Attorney Docket Number	357000-1200	

	U.S. PATENT DOCUMENTS									
		U.S. Patent De	ocument	Name of Patentee or Applicant of	Date of Publication of	Pages, Columns, Lines, Where Relevant				
Examiner Initials*	Cite No. ¹	Number	Kind Code ² (if known)	Cited Document	Cited Document MM-DD-YYYY	Passages or Relevant Figures Appear				
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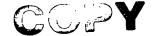
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Examiner Initials*	Cite No.1	F Office	oreign Patent Document Number Kind Cod	Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
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	B2	WO	2000/11208	University of Washington	3/2/00		

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	INFORMATI	ON DISCLOS	SURE "	Application Number	10/621,958						
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			12	First Named Inventor	Steven J. LOCKE						
	Date Subm	itted: May 6,	2 199	Group Art Unit	1641						
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Sheet	3	of	3	Attorney Docket Number	357000-1200						

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	C14	Goshe et al. "Phosphoprotein Isotope-Coded Affinity Tag Approach for Isolating and Quantitating Phosphopeptides in Proteome-Wide Analyses" <i>Anal. Chem.</i> 73:2578-2586 (2001)	
-	C15	Molloy et al. "Phosphopeptide Derivatization Signatures To Identify Serine and Threonine Phosphorylated Peptides by Mass Spectrometry" <i>Anal. Chem.</i> 73:5387-5394 (2001)	
	C16	Gygi et al. "Quantitative analysis of complex protein mixtures using isotope-coded affinity tags" Nature Biotech. 17:994-999 (1999)	
	C17	Oda et al. "Accurate quantitation of protein expression and site-specific phosphorylation" <i>Proc. Natl. Acad. Sci. USA</i> 96:6591-6596 (1999)	
	C18	Goodlett et al. "Differential stable isotope labeling of peptides for quantitation and de novo sequence derivation" Rapid Commun. Mass Spectrom. 15:1214-1221 (2001)	
	C19	Mirgorodskaya et al. "Quantitation of peptides and proteins by matrix-assisted laser desorption/ionization mass spectrometry using ¹⁸ O-labeled internal standards" <i>Rapid Commun. Mass Spectrom.</i> 14:1226-1232 (2000)	
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Sheet	2	of	3	-	Attorney Docket Number	357000-1200

		NON PATENT LITERATURE DOCUMENTS							
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.							
	C1	Heller, et al. "Synthesis of Biologically Active Tritiated Amylin and Salmon Calcitonin Analogues" Analytical Biochemistry 285:100-104 (2000)							
	C2	Sechi et al. "Modification of Cysteine Residues by Alkylation. A Tool in Peptide Mapping and Protein Identification" <i>Anal. Chem</i> 70:5150-5158 (1998)							
	C3	Cahill et al. "Analysis of relative isotopologue abundances for quantitative profiling of complex protein mixtures labeled with the acrylamide/D ₃ -acrylamide alkylation tag system" Rapid Commun. Mass Spectrom. 17:1283-1290 (2003)							
	C4	Gehanne et al. "Quantitative analysis of two-dimensional gel-separated proteins using isotopically marked alkylating agents and matrix-assisted laser desorption/ionization mass spectrometry" Rapid Commun. Mass Spectrom, 16:1692-1698 (2002)							
	C5	Hsu et al. "Stable-Isotope Dimethyl Labeling for Quantitative Proteomics" Anal. Chem. 75:6843-6852 (2003)							
	C6	Munchbach et al. "Quantitation and Facilitated de Novo Sequencing of Proteins by Isotopic N-Terminal Labeling of Peptides with a Fragmentation-Directing Moiety" <i>Anal. Chem.</i> 72:4047-4057 (2000)							
	C7	Smith et al. "Rapid quantitative measurements of proteomes by Fourier transform ion cyclotron resonance mass spectrometry" <i>Electrophoresis</i> 22:1652-1668 (2001)							
	C8	Weckwerth et al. "Comparative quantification and identification of phosphoproteins using stable isotope labeling and liquid chromatography/mass spectrometry" Rapid Commun. Mass Spectrom. 14:1677-1681 (2000)							
	C9	Ji et al. "Strategy for qualitative and quantitative analysis in proteomics based on signature peptides" J. of Chromatography B 745:197-210 (2000)							
	C10	Wang et al. "Proteomics based on selecting and quantifying cysteine containing peptides by covalent chromatography" J. of Chromatography A 924:345-357 (2001)							
	C11	Geng et al. "Signature-peptide approach to detecting proteins in complex mixtures" <i>J. of Chromatography</i> A 870:295-313 (2000)							
	C12	Yao et al. "Proteolytic ¹⁸ O Labeling for Comparative Proteomics: Model Studies with Two Serotypes of Adenovirus" <i>Anal. Chem.</i> 73:2836-2842 (2001)							
	C13	Conrads et al. "Quantitative Analysis of Bacterial and Mammalian Proteomes Using a Combination of Cysteine Affinity Tags and ¹⁵ N-Metabolic Labeling" <i>Anal. Chem.</i> 73:2132-2139 (2001)							

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